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ABSTRACT

Four models for screening for children with psychological problems are presented, each having a goal, a screening procedure, and a criterion against which the effectiveness of the procedure can be evaluated. The four are the illness model, the developmental model, the crisis model, and the match-mismatch model. Implications of models are considered. (JD)

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Models for Screening*

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Early detection of children with problems may be accomplished in many ways in school systems. Teachers in the primary grades can be encouraged to make more referrals to school or clinic professionals. School personnel can bring children earlier to diagnosis and treatment by more careful monitoring of home situations. Screening, as I will use the term, refers to still another kind of activity aimed at early detection. By screening, I mean the use of a systemmatic procedure to identify provisionally those children from a population who manifest, or are likely to manifest, an attribute which is judged to require special attention. Screening involves the economical and effective testing of a population of children but it is not mass diagnosis. Screening programs are designed to identify those children for whom a more complete assessment is warranted.

Complete screening programs involve at least three elements: a goal (in general, an explicit answer to the question, "What are we screening for?"); a screening procedure (a test or technique--the psychological equivalent of the Patch Test or miniature x-ray); and a

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criterion against which the effectiveness of the procedure can be evaluated. Not all screening programs are complete as completeness has been defined here. Indeed, explicit goal statements frequently are absent from reports of screening programs and it is difficult to judge from such reports precisely what kinds of children are expected to be screened out by the technique that is proposed or in use. In addition, the validity of particular screening techniques frequently is not established for the specific setting in which they are being used. The most common practice is to begin with an instrument, assume that the goal is clear, and hope that some criterion may be found that will help to evaluate effectiveness.

For the past few years, Dr. Clara Mayo of Boston University and I have been reviewing the available literature on screening programs. In the course of organizing what we have learned from this review, it has become helpful for us to think in terms of models for screening. We have come to believe that the consideration of models has important practical consequences for the design, administration, and evaluation of screening programs. Before discussing some possible models and their practical consequences, it is important to understand what we mean by "model." We use the term in the sense that the sociologist, Max Weber, meant when he spoke of "ideal types." A model specifies something "with which the real situation or action is compared and surveyed for the explication of certain of its significant components" (Weber, 1949; p. 93). A model, in this sense, is not something that <u>should</u> be copied faithfully. Rather it is a kind of schematic or pure form with which

programs that actually exist may be compared in the interst of better understanding. Sometimes, as for the school system interested in screening that does not yet have an actual program, the availability of alternative models means that choices about what might actually work in a given situation may be made more clearly and easily. Models also are helpful in clarifying the relations between goals for screening, screening techniques, and the evaluation of effectiveness.

The Illness Model

Models for screening are described most easily in terms of various possible goals for screening programs. The model to which most actual screening programs bear the greatest resemblance may be called an Illness Model. For purposes of this model, and in the screening programs that resemble it (e.g., Balser et al., 1965; Bower, 1969; Rutter, 1967; Stennett, 1966), problems of children are considered to be illnesses or manifestations of illness and the screening goal is the early identification of ill or disturbed children. By the conventions of this model, one regards problemmatic behaviors as symptoms caused by some underlying somatic or psychic pathology of structure or function. The underlying mental illness is inferred from the presence of a particular cluster of behavior called a symptom syndrome. Whatever the form of the screening instrument employed in programs resembling the Illness Model--check list, interview, teacher rating--symptoms seem to be the most appropriate content. There is one thoroughly appropriate criterion against which such symptom-measuring screening instruments can be validated and that is psychiatric diagnosis. As Turner and Cumming (1967) have pointed out, the physician's opinion is, by definition, the diagnosis.

The analogy between the Illness Model and screening for tuberculosis may be instructive. The goal is early detection of a disease, tuberculosis; the Mantoux Test is a utilitarian procedure designed to produce symptommatic information (a red weal) if the disease is present; the appropriate criterion against which the procedure has been validated is a more thorough examination, including x-ray, and ultimately a physician's diagnosis.

While most existing screening programs more closely approximate the Illness Model than any other, few of the programs take the concept of illness or psychological disorder very seriously. If they did, it seems likely that we would have screening programs for given kinds of disorders and not try to cover the entire content of the GAP Classification of Psychopathological Disorders (Group for the Advancement of Psychiatry, 1966) in one fifty-item checklist! No public health practitioner would run a screening program to locate cases of illness in general. Why should those who find it congenial to think of children's problems in terms of illness continue to attempt doing so? Why not work carefully on instruments designed to screen out neurosis, or kinds of neurotic children, or young sociopaths, or children with perceptual disorders? Rutter (1967) has had some success in this more differentiated kind of screening enterprise.

The general utility of viewing psychological problems as illnesses has been under increasingly perceptive scrutiny and even attack in the past decade. The following kind of comment is not atypical:

> The explicit attitude or mental habit of viewing behavioral deviations as symptoms of some inner pathogenic element, which must be identified through accurate diagnosis in order

> to treat it, reflects an assumption that organic disease and psychological disorder are structurally and etiologically isomorphic. Such an assumption is neither theoretically nor experimentally defensible (Turner & Cumming, 1967, pp. 42-43).

One might, then, find fault with an illness model for screening because of dissatisfaction with the more general ideology of which it is a manifestation. I am limited by space here to saying that I agree with Turner and Cumming that problems of living are best not thought of in disease-like terms. But in a way that agreement is irrelevant. Whether or not one believes that mental illness is a useful concept, there is a separate good reason for questionning the proliferation of screening programs which approximate the Illness Model.

To implement the goal of identifying hitherto undetected cases of mental illness in children means to look for children who <u>already</u> <u>are sick</u>--that's what cases are. From the point of view of effective prevention, however, early in the course of the illness might be too late. What we should be screening for is not the children who we regard as sick but those who have a high probability of becoming so. And if we now are not looking for sick children, a screening program which approximates the Illness Model is not appropriate. We might now wish to seek out children who are developmentally deviant, who are ineffective in coping with crises, or whose behavior does not match the requirements of social environments in which they find themselves. Let me now turn to a discussion of three models which may be helpful in designing programs to detect such "at-risk" children.

The Developmental Model

The goal which defines the <u>Developmental Model</u> is that of early detection of developmental deviation of one kind or another. The focus

is not upon behaviors thought to be symptommatic of a given underlying disease but rather upon delays in the onset of (patterns of) behavior normally expected to emerge within a given age period. Thus whatever form a developmental screening instrument might take, ultimately it should yield information that can be compared with developmental norms. And where solid information about development does not exist, screening programs which closely approximate the model are not possible. Since we have more information about early sensorimotor development than about cognitive or social development it is not surprising that most formal developmentally-oriented screening procedures focus on progressions in sensorimotor behavior and that their underlying assumptions are maturational and neurological (Chandler et al., 1962; Denhoff et al., 1968; Egan et al., 1969).

There are programs in which the terms "developmental" and "immature" are used but which are not developmental in the sense of this model. Screeners, as teachers often do, may use the word "immature" to describe behaviors they find problemmatical in the absence of any evidence which ties the behavior to a known developmental sequence. The child who gets the highest score on a checklist of negatively-valued behaviors may be characterized as backward, immature, or even retarded. But such a labelling process can be very misleading since behavior deviant from that of classmates does not necessarily have anything to do with sequences of developmental change. It may be a problem but it is not a developmental problem.

The appropriate criterion against which a developmentally-oriented screening instrument may be validated is the establishment by more thorough examination that a developmental delay does exist. Owing to

the wide individual variations in patterns of growth, one might expect that developmentally-oriented screening programs would turn up more false positives than screening programs with other objectives.

Developmental abnormalities may be seen as precursors to illness or as signs indicating that pathology already is present. Thus, variations on the Developmental Model can be employed by those who find it useful to conceptualize the problemmatical behaviors of children in terms of illness or emotional disturbance. School personnel whose orientation is to mental illness may elect, and sensibly so, to conceive of screening programs in developmental terms because what they are looking for is not "sick" children but those with a high probability of becoming so. Our third model, which highlights the concept of "crisis" may be employed for similar reasons.

The Crisis Model

"Crisis" has been one of the most seminal concepts for those interested in the prevention of problemmatic behavior (Caplan, 1964; Lindemann, 1944). Briefly, the notion is that a developmental or situational event--often involving a change or disruption in an existing social network, such as loss of a parent through death or separation, entry into kindergarten, entry into junior high school--disrupts an individual's equilibrium, making him susceptible to psychological impairment or psychological growth. Both outcomes occur. Many referrals of children to helping agencies are instigated by crisis-produced exacerbation of long-standing psychological problems. On the other hand, temporary disequilibrium often leads to growth. Think, for example, of the proud kindergartener's

new and insistent autonomy at home. Thus, early detection of children who have difficulty coping with crisis, the goal which defines the Crisis Model, is an advantageous preventative measure.

Whatever the form of the screening instrument (e.g., observing the child as he copes with the miniature crisis of separating from his mother in the waiting-room or constructing a checklist of behaviors indicative of competence [Kohn & Silverman, 1966]), the content of interest is coping or indications of its absence. The most appropriate validation criterion probably involves subsequent assessment of the children's behavior during crisis. Does the screening measure select out those children who emerge from a crisis at a lower level of functioning than was characteristic of them before the experience?

The Match-Mismatch Model

Children's behavior sometimes may pose problems for them and for others in the absence of illness, immaturity, or poor coping. Their behavior may fail to match the expectations of others who constitute a given social environment. This is one of the reasons for advancing a model for screening that is defined by the goal of detecting instances of behavior mismatch. The goal of the Match-Mismatch Model anchors screening within the social system in which the problemmatic behavior occurs. The assumption is that early detection of mismatches between a child and, say, his school or classroom environment will lessen the likelihood of more serious problems later on, e.g., progressive isolation and withdrawal from peers and alienation from educational institutions. We are unaware of any actual screening programs whose goals

closely approximate this model. Nevertheless, the potential utility of such programs is suggested by the repeated finding that social pathology of all kinds in older children and adults is associated with marginal social status and anomie (Leighton, 1959).

Procedurally, this model calls as much for the assessment of the social environment as of the child. One might screen children for their (lack of) match to the expectations of Teacher X or teachers of Kind X. The model calls attention to the possibility that mismatch may at times indicate a need for further assessment and ultimate change in the social environment--in Teacher X or teachers of Kind X--as much as a need for assessment and possible change in the children screened-out. Is not, for example, such a mismatch often the case between the expectations of the middle-class teacher and the behavior of so-called disadvantaged children?

Screening procedures which call for global judgments on the part of teachers about adjustment, mental health, or some other broad and ill-defined category probably serve better to detect cases of mismatch than cases that would fit any rigorous definition of illness, developmental deviation, or poor coping. In 1928, Wickman found that teachers' judgments of the seriousness of certain negatively-valued behaviors had a zero correlation with mental hygienists' judgments. As Bower (1969) summarizes it, "...it was obvious that teachers were concerned with behavior which related to classroom disruption, and mental health people were concerned with behavior which was disturbing the child's inner psyche" (p. 93). As I read the evidence on this problem that has accumulated since Wickman's time, things are much the same today. Thus, those

who rely heavily on teacher participation in screening might be wise to consider a set of goals for their screening program that has more to do with (mis)match than with internal disorder.

Some Further Implications of Models

By and large this has been a descriptive paper intended to alert present and would-be screeners to the possibility of looking at their work in some different or alternative ways. One legitimate question is whether or not the ways make a difference. Although the study hasn't been done yet which would prove it, it seems probable that screening programs faithfully based upon different models would screen-out different children from the same population. If so, one could argue even more forcefully that programs, like the models, should be defined and developed in terms of stated goals. The more explicit the goal statement, the easier it is to chose an appropriate screening instrument and to conduct an adequate evaluation.

Most school systems are better prepared to help children with certain kinds of problems than others. Expending resources for screening children for whom the possibility of further assessment and remediation is not possible does not make much sense. The more limited the resources, the more crucial that the goals for screening be coordinate with those of the system's other pupil personnel services. Of course, finding the children one is in a position to help also requires that an instrument be chosen that is apposite to the goal.

In screening, as in other endeavors, choices often seem determined by availability. Because a test has the same name as we give the problem

we are interested in, we assume that the test will measure what we are interested in. We use it because it is available and not always necessarily because of its explicit relation to the problem we want to solve. Thinking in terms of models may be helpful in repealing what Abraham Kaplan has called The Law of the Instrument. This law has to do with the propensity to use instruments without regards to goals. (In the case of screening programs, this lack of fit often seems to occur because the goals were not stated explicitly enough to influence the screener's preference for one instrument as opposed to another.) Kaplan (1964) nails down the same point more poetically: "I call it the law of the instrument, and it may be formulated as follows: Give a small boy a hammer, and he will find that everything he encounters needs pounding" (p. 28).

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